

L37 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN  
 AN 2000:15291 CAPLUS  
 DN 132:79807  
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 TI Crosslinkable silicone composition useful for coating and/or impregnating  
 to produce water and/or oil repellency with low surface energy  
 IN Mignani, Gerard; Olier, Philippe; Priou, Christian  
 PA Rhodia Chimie, Fr.  
 SO PCT Int. Appl., 44 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA French  
 IC ICM C09D183-08  
 ICS D06M015-657  
 CC 42-10 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 40  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000000559	A1	20000106	WO 1999-FR1516	19990624 <--
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	FR 2780407	A1	19991231	FR 1998-8485	19980630
	FR 2780407	B1	20000915		
	CA 2335926	AA	20000106	CA 1999-2335926	19990624
	AU 9942714	A1	20000117	AU 1999-42714	19990624
	EP 1093497	A1	20010425	EP 1999-957640	19990624
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
	BR 9912505	A	20010502	BR 1999-12505	19990624
	TR 200100347	T2	20011022	TR 2001-200100347	19990624
	JP 2002519470	T2	20020702	JP 2000-557314	19990624
PRAI	FR 1998-8485	A	19980630		
	WO 1999-FR1516	W	19990624		

# CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000000559	ICM	C09D183-08
	ICS	D06M015-657
WO 2000000559	ECLA	C09D183/08+B4S; C09K003/18; D06M015/657 <--
FR 2780407	ECLA	D06M015/657

AB A perfluorinated silicone composition provides an antifouling coating and/or impregnant with improved adhesion to substrates and with increased service life. The composition comprises: (A) a perfluorinated polysiloxane bearing  $\geq 1$  grafted chain  $(CH_2)_mCR(CO_2Q_1)(CR_2)nC_2O_2Q_2$  [ $Q_1, Q_2 = (CF_2)_qF, (CF_2)_qH$ ; each R = H, C1-6 alkyl; m = 1-10; n = 0-4; q  $\geq 1$ ] and  $\geq 1$  crosslinking function, (B) a crosslinking agent (e.g., tetramethyldivinylidisiloxane) bearing  $\geq 2$  groups capable of reacting with the crosslinking functions of A, optionally (C) a catalyst for reaction of A with B, and optionally (D) one or several functional additives. The crosslinking typically involves reaction of Si-bonded H with vinyl groups or of carboxy groups with oxazolines. The composition provides waterproofing, antifouling, and/or stain-repelling coatings for various substrates such as textiles.

ST fluoro siloxane coating low surface energy; water repellent coating fluoro siloxane; stain repellent coating fluoro siloxane; oil repellent coating

fluoro siloxane

IT Coating materials  
(antifouling; crosslinkable silicone composition for coating and/or impregnating to produce water and/or oil repellency with low surface energy)

IT Polysiloxanes, uses  
Polysiloxanes, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(fluorine-containing, reaction products with unsatd. fluorinated diesters; crosslinkable silicone composition for coating and/or impregnating to produce water and/or oil repellency with low surface energy)

IT Coating materials  
(oil- and water-resistant; crosslinkable silicone composition for coating and/or impregnating to produce water and/or oil repellency with low surface energy)

IT Fluoropolymers, uses  
Fluoropolymers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polysiloxane-, reaction products with unsatd. fluorinated diesters; crosslinkable silicone composition for coating and/or impregnating to produce water and/or oil repellency with low surface energy)

IT 111-66-0D, 1-Octene, reaction products with fluoro hydro polysiloxanes  
24338-09-8D, Trimethylsilyl 10-undecenoate, reaction products with fluoro hydro polysiloxanes, deprotected 253787-64-3D, reaction products with fluoro hydro polysiloxanes 253787-65-4D, reaction products with fluoro hydro polysiloxanes  
RL: TEM (Technical or engineered material use); USES (Uses)  
(crosslinkable silicone composition for coating and/or impregnating to produce water and/or oil repellency with low surface energy)

IT 2627-95-4, 1,1,3,3-Tetramethyl-1,3-divinyldisiloxane 36931-59-6, 2,2'-Tetramethylenebis(2-oxazoline)  
RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(crosslinking agent; crosslinkable silicone composition for coating and/or impregnating to produce water and/or oil repellency with low surface energy)

IT 28652-54-2, Ethynylcyclohexanol  
RL: MOA (Modifier or additive use); USES (Uses)  
(crosslinking inhibitor; crosslinkable silicone composition for coating and/or impregnating to produce water and/or oil repellency with low surface energy)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Andrews, A; US 4826921 A 1989 CAPLUS
- (2) Dow Corning Toray Silicone; EP 0472215 A 1992 CAPLUS
- (3) Dow Corning Toray Silicone; EP 0567970 A 1993 CAPLUS
- (4) Nippon Paint Co Ltd; EP 0376293 A 1990 CAPLUS
- (5) Nippon Paint Co Ltd; EP 0414962 A 1991 CAPLUS
- (6) Rhone Poulenc Chimie; FR 2737215 A 1997 CAPLUS
- (7) Shinetsu Chemical Co; EP 0393984 A 1990 CAPLUS

RN 111-66-0D  
RN 24338-09-8D  
RN 253787-64-3D  
RN 253787-65-4D  
RN 2627-95-4  
RN 36931-59-6  
RN 28652-54-2

L37 ANSWER 2 OF 2 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN  
AN 2000-126782 [11] WPIX  
DNC C2000-038701  
TI Perfluorinated silicone composition for low surface energy coatings.  
DC A26 A87 E11 F06 G02

IN MIGNANI, G; OLIER, P; PRIOU, C

PA (RHOD) RHODIA CHIM

CYC 87

PI WO 2000000559 A1 20000106 (200011)\* FR 44 C09D183-08 <--  
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL  
OA PT SD SE SL SZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB  
GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU  
LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR  
TT UA UG US UZ VN YU ZA ZW

FR 2780407 A1 19991231 (200011) C08L083-04

AU 9942714 A 20000117 (200026) C09D183-08

EP 1093497 A1 20010425 (200124) FR C09D183-08

R: AT BE CH DE DK ES FI FR GB GR IE IT LI NL PT SE

BR 9912505 A 20010502 (200129) C09D183-08

CN 1310749 A 20010829 (200176) C09D183-08

JP 2002519470 W 20020702 (200246) 48 C08L083-08

ADT WO 2000000559 A1 WO 1999-FR1516 19990624; FR 2780407 A1 FR 1998-8485

19980630; AU 9942714 A AU 1999-42714 19990624; EP 1093497 A1 EP

1999-957640 19990624, WO 1999-FR1516 19990624; BR 9912505 A BR 1999-12505

19990624, WO 1999-FR1516 19990624; CN 1310749 A CN 1999-808999 19990624;

JP 2002519470 W WO 1999-FR1516 19990624, JP 2000-557314 19990624

FDT AU 9942714 A Based on WO 2000000559; EP 1093497 A1 Based on WO 2000000559;

BR 9912505 A Based on WO 2000000559; JP 2002519470 W Based on WO

2000000559

PRAI FR 1998-8485 19980630

IC ICM C08L083-04; C08L083-08; C09D183-08

ICS C08G077-24; C08G077-385; C09D005-16; C09D183-04; D06M015-657

ICA C09K003-18; C10M107-50

AB WO 2000000559 A UPAB: 20000301

NOVELTY - Crosslinkable silicone composition is used to make water- and/or oil-repellent coatings with low surface energy.

DETAILED DESCRIPTION - Crosslinkable silicone composition used to make water- and/or oil-repellent coatings with low surface energy comprises: at least a perfluorinated POS, A; at least a crosslinking agent, B, perfluorinated or not, and capable of reacting with A; optional catalyst, C, for the reaction(s) between A and B; and, optionally, one or more functional additives, D; in which each molecule of A has one or more perfluorinated grafts, Gf, of formula (I) - (CH<sub>2</sub>)<sub>m</sub>-CR<sub>1</sub>(COORf<sub>2</sub>)((CR<sub>12</sub>-)n-COORf<sub>1</sub>) (I)

R<sub>1</sub> = H or 1 - 6 C alkyl;

Rf<sub>1</sub> and Rf<sub>2</sub> = perhalogenated, preferably perfluorinated radicals and most preferably -CqF<sub>2</sub>q-CF<sub>3</sub> where q at least 0 (II) or CqF<sub>2</sub>q-H where q at least 1 (III);

m = 1 - 10;

n = 0 - 4;

and one or more crosslinking functions, Fra; and each molecule of B has at least 2 crosslinking functions, Frb, which can react with Fra.

INDEPENDENT CLAIMS are also included for a POS constituent of said composition; and method for making coatings using said composition.

USE - In making low surface energy water- and/or oil-repellent coatings or impregnations (claimed).

ADVANTAGE - Coatings have improved adherence and longer life span.

Dwg.0/0

FS CPI

FA AB; DCN

MC CPI: A08-C01; A08-D01; A09-A08; A10-E; A12-B01C; E05-E02B; F03-C02; F03-C02A; G02-A05

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